



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/691,669	10/24/2003	Andrew Charles Renshaw	116664	6335
25944	7590	12/30/2005		
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			EXAMINER CHARLES, MARCUS	
			ART UNIT 3682	PAPER NUMBER
DATE MAILED: 12/30/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/691,669

Applicant(s)

RENSHAW, ANDREW CHARLES

Examiner

Marcus Charles

Art Unit

3682

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/23/05, 5/21/04 & 12/15/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

This is the first action relating to serial application number 10/691,669 filed 10/24/2003. Claims 1-8 are currently pending.

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) is required in this application because figure 2 must be clearly labeled. In addition an expanded and clearer version of fig. 2 is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

4. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 7, it is not clear as to what is being referred to as the perimeter edge of the disc or the inner edge of the annulus. It appears that the inner edge and the perimeter edge are the threaded sections. The claims will be prosecuted as if the inner edge and the perimeter are the threaded sections.

In addition, the inner edge of the annulus and the perimeter edge of the disc lack antecedent basis.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

6. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Westlake (4,043,214). Westlake discloses a sprocket comprising a first disc (20) having a first circular threaded external perimeter, and an external toothed annulus (10) having an internal threaded perimeter and is threadably attached around the perimeter of the annulus.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 1-3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP (2000-257699) to Yasuhiro in view of Muller (3,651,708). Yasuhiro discloses a sprocket comprising a disc (2) of a first metal material having a substantially circular perimeter and an externally tooth annulus of a second metal material (1) which is attached around the perimeter of the disc by the inner edge of the annulus being engaged with the perimeter of the disc.

Art Unit: 3682

Yasuhiro does not disclose the disc and the annulus being threadably engaged and further connected by a pin. Muller discloses a gear having a detachable gear ring (1) and an annulus metallic disc core (2) that are threadably connected together and further connected by pins (5). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the device of Yasuhiro so that the disc and annulus are threadably connected and further connected by pins in view of Muller in order to be able to dismantle or replace the gear tooth without damaging or replacing the entire gear device.

In claim 2, note the disc and the annulus are substantially the same thickness.

In claim 3, the perimeter edge of the disc and the inner edge of the annulus have substantially the same thickness.

In claims 8, In Muller device, it should be noted that there are at least two threads of the annulus ring engaging at least eight threads of the disc. Therefore, it is apparent that there must be at least six turns between the ring and the disc during the engaging procedure.

9. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Westlake in view of FR (0414004). Westlake does not disclose the threaded connections further include adhesive applied therebetween. It is well known in the art to include adhesive between threaded engagements in order to prevent the connections from inadvertently loosening during operation and to protect the threaded joints from atmospheric contamination includes rust which consequently

Art Unit: 3682

causes the just to be welded to each other via rust scales. FR (0414004) discloses a threaded section having silicone adhesive therebetween. Therefore, it would have been obvious to one of ordinary skill in the art to provide a silicone adhesive between the threading of Westlake device in view of FR (0414004) in order to prevent the connections from inadvertently loosening during operation and to protect the threaded joints from atmospheric contamination includes rust which consequently causes the just to be welded to each other via rust scales.

10. Claims 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yasuhiro in view of Muller. Yasuhiro fails to disclose the thickness range thickness of the annulus and disc. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the thickness of Yasuhiro so the disc and annulus has a thickness ranging from 3mm to 10 mm, since it has been held that where the general conditions of the claim are disclosed in the prior art, discovering the optimum or workable ranges involves routine skill in the art. In re Aller, 105 USPQ 233.

Conclusion


11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Fenelon (5,943,913), Grundner et al. (6,090,320), Hodjat (6,386,065), Noplis (5,609,127), Slopsema et al. (6,959,682), Harvey (3,069,922) EP (153289), DE (44417040) disclose a sprocket connected to a disc. EP (0508135), EP (0414004) and EP (0565957) disclose engaged threadings including adhesive.

Art Unit: 3682

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marcus Charles whose telephone number is (571) 272-7101. The examiner can normally be reached on Monday-Thursday 7:30 am to 6:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ridley Richard can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Marcus Charles
Primary Examiner
Art Unit 3682
December 08, 2005